

Listing of the Claims

The following listing of claims will replace all prior versions and listings of the claims in the application:

1-10 (Canceled)

11. (Currently Amended) A wafer processing system comprising:
at least one surface tension gradient device capable of supporting a process in a liquid meniscus, the surface tension gradient device including a proximity head including:
a plurality of source inlets; and
a plurality of source outlets;
an in-situ sensor for monitoring a result of the process; and
a system controller being coupled to the in-situ sensor and the surface tension gradient device, the system controller including a process recipe.

12. (Original) The system of claim 11, wherein the process can include at least one of a group of processes consisting of a cleaning process, a rinsing process, an etch process, a deposition process, and an electroplating process.

13. (Original) The system of claim 11, wherein the in-situ sensor can include at least one of a group consisting of an optical sensor and an eddy current sensor.

14. (Original) The system of claim 11, wherein the monitored result is output in real time.

15. (Canceled)

16. (Canceled)

17. (Currently Amended) The system of claim 11~~claim 16~~, wherein the in-situ sensor is included within the surface tension gradient device.

18. (Original) The system of claim 17, wherein the meniscus includes a dry region surrounding the in-situ sensor.

19. (Original) The system of claim 11, wherein the in-situ sensor can be moved with the surface tension gradient device.

20. (Original) The system of claim 11, wherein the in-situ sensor can be moved independent from the surface tension gradient device.

21. (Canceled)

22. (New) The system of claim 11, wherein the liquid meniscus is supported between a surface of the proximity head and a surface of the wafer being processed.

23. (New) The system of claim 22, wherein the surface of the proximity head has a first hydrophilic property and the surface of the wafer being processed has a second hydrophilic property.

24. (New) The system of claim 23, wherein the first hydrophilic property is different than the second hydrophilic property.

25. (New) The system of claim 22, wherein the surface of the proximity head is hydrophilic and the surface of the wafer being processed is hydrophobic.

26. (New) The system of claim 11, wherein the controller includes logic for adjusting the recipe for the process in the process controller according to the monitored results.

27. (New) The system of claim 26, wherein the logic for adjusting the recipe for the process in the process controller according to the monitored results includes logic for adjusting the process in real time.

28. (New) A wafer processing system comprising:

a proximity head capable of supporting a process in a liquid meniscus, the liquid meniscus being supported between a surface of the proximity head and a surface of the wafer being processed, the proximity head including:

- an in-situ sensor for monitoring a result of the process;
- a plurality of source inlets; and
- a plurality of source outlets; and

a system controller being coupled to the in-situ sensor and the surface tension gradient device, the system controller including a process recipe.

29. (New) The system of claim 28, wherein the controller includes logic for adjusting the recipe for the process in the process controller according to the monitored results.

30. (New) A wafer processing system comprising:

a proximity head capable of supporting a process in a liquid meniscus, the liquid meniscus being supported between a surface of the proximity head and a surface of the wafer being processed, wherein the surface of the proximity head has a first hydrophilic property and the surface of the wafer being processed has a second hydrophilic property, the proximity head including:

- a plurality of source inlets; and
- a plurality of source outlets;
- an in-situ sensor for monitoring a result of the process; and
- a system controller being coupled to the in-situ sensor and the surface tension

gradient device, the system controller including a process recipe, system controller including logic for adjusting the recipe for the process in the process controller according to the monitored results in real time.